

REMARKS

The Office Action dated December 28, 2006 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-18 are submitted for consideration.

Claims 1-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Application Publication No. 2002/0098839 to Ogino (hereinafter Ogino) in view of U.S. Patent No. 6,201,802 to Dean (hereinafter Dean). According to the Office Action, Ogino teaches all of the elements of claims 1-18 except for teaching moving the network survey device and receiving signal for determining its location. Therefore, the Office Action combined Ogino and Dean to yield all of the elements of claims 1-18. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 9, 11 and 12 and the related claims thereon.

Claim 1, upon which claims 2-8 depend, recites a method including receiving signals from a location system external to a network for determining a location of a network survey device. The method is used for performing a network survey for a radio telecommunications network including two or more base stations. The method also includes locating the network survey device at a first location and, with the network survey device at the first location, receiving signals from a first base station of the network at the first location by means of the network survey device, thereby measuring synchronization of said first base station relative to a reference time-frame determined

from the location system. The method further includes moving the network survey device to a second location and, with the network survey device at the second location, receiving signals from the first base station at the second location by the means of a network survey device, thereby measuring synchronization of said first base station relative to the reference time-frame.

Claim 9, upon which claim 10 depends, recites a network survey device including first receiving means for receiving signals from base stations, second receiving means for receiving a reference time-frame signal and first measuring means for measuring synchronization of base stations relative to a reference time-frame.

Claim 11, upon which claim 18 depend, recites a network survey device including a first receiver configured to receive signals from base stations and a second receiver configured to receive a reference time-frame signal. The network survey device also includes a measuring device configured to measure synchronization of a base station relative to a reference time-frame.

Claim 12, upon which claims 13-17 depend, recites a method including receiving signals from a location system external to a network for determining a location of a network survey device. The method is used for obtaining network survey information in a telecommunications network including a plurality of base stations. The method also includes locating the network survey device at a first location and, with the network survey device at the first location, receiving signals from at least one of a plurality of base stations at the first location by means of the network survey device, thereby

measuring synchronization of said at least one base station of said plurality of base stations relative to a reference time-frame determined from the location system. The method further includes moving the network survey device to a second location and, with the network survey device at the second location, receiving signals from said at least one base station of said plurality of base stations at the second location by the means of a network survey device, thereby measuring synchronization of said at least one base station of said plurality of base stations relative to the reference time-frame.

As will be discussed below, the cited prior art references of Ogino and Dean fail to disclose or suggest the elements of any of the presently pending claims.

Ogino discloses a system for more accurately determining a location of a mobile station in a mobile communications network. The base stations in the network synchronize their timing using GPS. The mobile station then determines the delay between the signals of the base stations to calculate its position. See at least paragraphs 0027-0035 of Ogino. Ogino also discloses a system for determining a transmission time offset generated by a base station by placing offset determination devices at multiple locations. The multiple locations for the offset determination devices are required to provide redundancy to ensure that the first received signal has not been delayed during transmission. See at least paragraphs 0042 and 0045 of Ogino.

Dean discloses a system for determining the delay caused within a base station for transmission. A timing analyzer receives signals from the base station and determines a timing offset. See at least the Abstract and paragraphs 0060-0067 of Dean.

Applicants submit that the combination of Ogino and Dean fails to teach or suggest the combination of elements recited in the presently pending claims. As noted previously, each of claims 1 and 12, in part, recites moving the network survey device to a second location and, with the network survey device at the second location, receiving signals from the first base station at the second location by the means of a network survey device, thereby measuring synchronization of said first base station relative to the reference time-frame. Claims 9 and 11 recite elements of a network survey device. As acknowledged in the Office Action, Ogino does not disclose devices that can be moved to multiple locations to capture timing difference information. Consequently, Ogino does not teach or suggest a method or device to enable the creation of a network survey as recited in claims 1, 9, 11 and 12.

Dean does not cure the deficiencies of Ogino, as alleged by the Office Action. Specifically, Dean does not teach or suggest generating a network survey of timing difference from various locations. Dean is directed to solving the problem of delays caused within the base station, i.e., timing offsets, rather than timing differences caused by the topography of the network.

Furthermore, Applicants submit that Ogino and Dean address the problem of correcting for timing offsets within base stations. Neither Ogino nor Dean raises the issue of calculating a network survey which can be used for calibrating the network. Furthermore, neither Ogino nor Dean teach or suggest a device which records timing differences at two or more locations for use in a network survey. Applicants also submit

that one skilled in the art would not be motivated to modify the teachings of Ogino and Dean to yield the elements recited in the presently pending claims.

In the “Response to Arguments” section, the Office Action indicated that it is not clear how the argument that Dean does not teach or suggest generating a network survey of timing difference from various locations, as made in the previous Response, relate to the claim limitations. Each of claims 1, 9, 11 and 12 recites locating a network survey device to a first location and measuring synchronization of a first base station relative to a reference time-frame determined from a location system and moving the network survey device to a second location and measuring synchronization of a first base station relative to a reference time-frame. Therefore, Applicants submit that the pending claims recite generating a network survey of timing difference from various locations.

The Office Action alleged that Dean and Ogino teach timing difference from different locations. As noted in the Office Action, Dean discloses gathering time offsets from base stations. Ogino teaches surveying timing differences at different locations. However, neither Dean nor Ogino teach or suggest generating a network survey of timing difference from various locations by locating the network survey device to a first location and measuring synchronization of a first base station relative to a reference time-frame determined from a location system and moving the network survey device to a second location and measuring synchronization of a first base station relative to a reference time-frame, as recited in the pending claims. The timing offsets gathered in Dean is not equivalent to a network survey of timing difference, as recited in the pending claims.

Furthermore, surveying timing differences at different locations, as disclose in Ogino, is not equivalent to generating a network survey of timing difference from various locations, as recited in the pending claims.

The Office Action also alleged that there is no mention of recording in the pending claims. Applicants submit that the pending claims recite performing a network survey by measuring at synchronization of the first base station at the first and second locations. Therefore, Applicants submit that it is clear that the measurements would have to be recorded in order to perform the network survey.

Claims 1 and 12 also recite receiving signals from a location system external to a network for determining a location of a network survey device. The Office Action alleged that Dean teaches a network survey device receiving signals "... for determining its location". In Dean, the proposed processing element for measuring/analyzing the timing of the base station includes a GPS receiver. Applicants note that the GPS receiver can be used for two purposes, for positioning (navigate mode) and for providing a timing reference (timing mode). The sole purpose of the GPS receiver in Dean, however, is to derive the absolute timing required to perform the measurement. In Dean, the navigation mode is only needed initially, since it is only possible to derive the absolute time from the GPS system after the GPS receiver is locked to enough satellites. There is no evidence, in Dean, that the GPS receiver is needed to determine the position of the device for performing the proposed measurement.

This becomes even clearer since in the first detailed embodiment of Dean, only one measurement as close as possible to the base station antenna is performed. Therefore, in Dean, the position of the measurement device can be assumed to be the same as the base station position, especially when also taking into account the inaccuracy of GPS for determining the position. In Col. 6, lines 36-43 of Dean, it is even indicated indirectly that the delay introduced by the wireless link can be neglected (in the range of 100ns), if one compares it to the specified delay limits (3us) mentioned in Col. 6, lines 19-24, which are the limits of the present measurement in the preferred embodiment. The GPS receiver is needed in this embodiment of Dean solely as timing reference to perform the timing offset (delay) measurement.

In the second embodiment of Dean, starting at Col. 8, line 57, it is even stated that the GPS receiver is not needed at all (in order to reduce the costs of the measurement device = timing analyzer), hence no positioning data is needed for the measurement process. Therefore, Applicants submit that Dean also clearly fails to teach or suggest the feature determining a location of a network survey device, as recited in claims 1 and 12. Based on the arguments presented above, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Ogino nor Dean, whether taken singly or combined, teaches or suggests each feature of claims 1, 9, 11 and 12 and hence, dependent claims 2-8, 10 and 13-18 thereon.

As noted previously, claims 1-18 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore

respectfully requested that all of claims 1-18 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Arlene P. Neal
Registration No. 43,828

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

APN: jkm